Running Head: Management Strategies

# MANAGEMENT STRATEGIES TO ENSURE SUCCESSFUL ADAPTATION TO ENROLLMENT BASED CAPITATION BUDGETING METHODOLOGY AT MACH

A Graduate Management Project
Submitted to the Faculty of Baylor University
In Partial Fulfillment of the Requirements for the Degree of
Masters in Health Care Administration

by

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4 June 1998

# REPORT DOCUMENTATION PAGE

*Form Approved*
*OMB No. 0704-0188*



| 1. AGENCY USE ONLY *(Leave blank)* | 2. REPORT DATE | 3. REPORT TYPE AND DATES COVERED |
|---|---|---|
| | JUNE 1998 | FINAL REPORT (07-97 TO 07-98) |

**4. TITLE AND SUBTITLE**
MANAGEMENT STRATEGIES TO ENSURE SUCCESSFUL ADAPTATION TO ENROLLMENT BASED CAPITATION BUDGETING METHODOLOGY AT MACH

**5. FUNDING NUMBERS**

**6. AUTHOR(S)**
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MONCRIEF ARMY COMMUNITY HOSPITAL (MACH)
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**8. PERFORMING ORGANIZATION REPORT NUMBER**
16-98

**9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)**
US ARMY MEDICAL DEPARTMENT CENTER AND SCHOOL
BLDG 2841 MCCS-HRA US ARMY-BAYLOR PROGRAM IN HCA
3151 SCOTT RD SUITE 1412
FORT SAM HOUSTON, TEXAS 78234-6135

**10. SPONSORING / MONITORING AGENCY REPORT NUMBER**

**11. SUPPLEMENTARY NOTES**

**12a. DISTRIBUTION / AVAILABILITY STATEMENT**
APPROVED FOR PUBLIC RELEASE; DISTRIBUTION IS UNLIMITED

**12b. DISTRIBUTION CODE**

**13. ABSTRACT** *(Maximum 200 words)*

The objective of this research project is to explore the various management strategies that may be implemented to facilitate the transition to an Enrollment Based Capitation (EBC) budgeting methodology at Moncrief Army Community Hospital (MACH) Fort Jackson, South Carolina. The methodology used for this project was to review a variety of the significant systems and practices currently being employed at MACH, predict the impact of these systems during the transition to EBC, and recommend any appropriate modifications to facilitate the transition to EBC.

This project addresses the current historical based budgeting process and contrasts it to the Enrollment Based Capitation budget process proposed by the Department of Defense Health Program. This comparison was made to demonstrated those practices under historical based budgeting that will adversely effect the outcomes of EBC. The significant management strategies are derived from various programs currently in place at MACH.

The results of the project are recommendations for the MACH to consider in order to ensure success during the turbulent transition period. The recommendations are correlated to marketing, the importance of information systems, utilization management, reorganization, accuracy of data input, and efficiency of services provided.

**14. SUBJECT TERMS**
Capitation, Budget, Management, Strategies

**15. NUMBER OF PAGES**
44

**16. PRICE CODE**

| 17. SECURITY CLASSIFICATION OF REPORT | 18. SECURITY CLASSIFICATION OF THIS PAGE | 19. SECURITY CLASSIFICATION OF ABSTRACT | 20. LIMITATION OF ABSTRACT |
|---|---|---|---|
| N/A | N/A | N/A | UL |

Acknowledgements

My preceptor, COL R. Bernard Chapman, JR. was inspirational in his role as a mentor while I completed the residency phase of the training program. His guidance and tutelage afforded me the most beneficial opportunities to expand my knowledge on the operations of military medical facilities and the Department of Defense health care system. In addition I was able to become familiar with some local civilian health systems and simultaneously successfully complete my Graduate Management Project. The staff of Moncrief Army Community Hospital was equally helpful in the assistance they provided me during rotations and in the completion of this project. In particular I would like to thank the Resource Management Division and Mr. Robert Corley, Chief of Financial Resources, who contributed an inordinate amount of professional knowledge to insure the accuracy of the data in my project. Mrs. Pam English of the Managed Care Division also proved to be an invaluable resource throughout my research at MACH. I would like to thank my academic counselor and "GMP reader" LTC Brett Walker for his patience and persistence. His tutelage helped ensure that the project would provide added value to operations at Moncrief Army Community Hospital. Finally, I would like to extend a heartfelt appreciation to my wife and children who sacrificed the time and energy to support me throughout this endeavor.

## Abstract

A significant portion of the managed care health care industry is currently undergoing a momentous transition from the traditional fee-for-service payment methodology to a capitated type of reimbursement system. The military, being one of the largest providers of health care in the country, is also participating in this transition.

The objective of this research project is to explore the various management strategies that may be implemented to facilitate the transition to an Enrollment Based Capitation (EBC) budgeting methodology at Moncrief Army Community Hospital (MACH) Fort Jackson, South Carolina. The methodology used for this project was to review a variety of the significant systems and practices currently being employed at MACH, predict the impact of these systems during the transition to EBC, and recommend any appropriate modifications to facilitate the transition to EBC.

This project addresses the current historical based budgeting process and contrasts it to the Enrollment Based Capitation budget process proposed by the Department of Defense Health Program. This comparison was made to demonstrated those practices under historical based budgeting that will adversely effect the outcomes of EBC. The significant management strategies are derived from various programs currently in place at MACH. The programs were divided into three separate categories. The first category is maintaining accurate workload data and insuring the facility receives proper credit for services rendered. The second category addresses the ability of MACH to improve its access standards for those enrolled in TRICARE Prime. The third category is overall efficiency of the organization.

The results of the project are recommendations for the Moncrief Army Community Hospital Commander to consider in order to ensure success during the turbulent transition period. The recommendations are correlated to marketing, the importance of information systems, utilization management, reorganization, accuracy of data input, and efficiency of services provided.

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## INTRODUCTION

Moncrief Army Community Hospital (MACH) is a general surgical and medical treatment facility located at Fort Jackson, South Carolina. Fort Jackson is a Training and Doctrine Command (TRADOC) post with the primary mission of conducting Basic Combat Training and Advanced Individual Training for newly recruited soldiers. The primary mission of Moncrief Army Community Hospital is to support the post and its Initial Entry Training (IET) mission by providing initial entry medical evaluations, education, immunizations and eyewear to over 40,000 soldiers in training (SITs) annually. MACH is also charged with providing quality, comprehensive health care for its active duty (AD) soldiers and other eligible beneficiary populations. MACH must also maintain a high state of military preparedness in order to support any contingency operations.

Moncrief Army Community Hospital is part of the Department of Defense (DoD) Military Health System (MHS). In accordance with the national trend toward managed care, the Department of Defense has implemented Tri-Service Health Care (TRICARE). TRICARE is the DoD version of a managed care program that is designed to effectively provide the greatest amount of services to the greatest amount of people. The most recent modification to the MHS mange care program is the transition to an Enrollment Based Capitation (EBC) budget methodology based user population of the individual treatment facilities. In order to understand how this impacts the specific treatment facilities a more in depth explanation of TRICARE and the current budget process is required.

TRICARE is a regional managed care program for active duty personnel, their family members, and retirees and their family members. TRICARE uses the Army, Navy and Air Forces Medical Treatment Facilities (MTFs) and supplements their capabilities with networks of civilian

providers in an effort to provide high quality service while maintaining the ability to support military operations (Martin, 1993). The goals of TRICARE are to significantly improve beneficiary access to care and ensure a consistently high quality and customer-focused health care benefit package for all Military Health System (MHS) beneficiaries. It is designed to provide this service at a low cost, preserve choice for all non-active duty participants, and contain overall DoD health care costs (Martin, 1996). TRICARE is divided into 14 geographic regions in the U.S., Europe and Pacific. There is a DoD Lead Agent office that manages each region. TRICARE offers 3 options to beneficiaries; TRICARE Prime, TRICARE Extra and Standard.

TRICARE Prime is a health maintenance organization style of program. TRICARE Prime focuses on military hospital health care, supplemented by a group of preferred providers organized by the regional TRICARE Managed Care Support Contractor. Active duty members are automatically enrolled into the Prime option. Other TRICARE eligible beneficiaries may voluntarily enroll in this option. Priority for enrollment is given to active duty personnel, family members, and all other eligible beneficiaries. As part of the enrollment process, each enrollee is assigned a Primary Care Manager (PCM). The PCM is responsible for the patient's total health care needs. TRICARE Prime offers some preventive care and wellness health services. TRICARE Prime enrollees may also utilize a Point of Service (POS) option which allows them to bypass their PCM to seek care by a provider of their choice, but at an increased cost. Enrollment in TRICARE Prime allows the health care system to match beneficiary demand for health services with the appropriate level of medical support.

TRICARE Extra is a preferred provider organization (PPO) type option that allows the beneficiaries who are not enrolled in TRICARE Prime to utilize a network of preferred providers at discounted rates established by an agreement with the Managed Care Support Contractor. In

addition to minimal cost sharing, beneficiaries choosing TRICARE Extra have an annual fiscal year outpatient deductible to satisfy.

TRICARE Standard is the third option available to eligible members. TRICARE Standard is the DoD's current fee for service insurance program, formally known as Civilian Health and Medical Program for the Uniform Services (CHAMPUS). Members of TRICARE Standard pay a deductible and incur a more expensive cost share for services than users of TRICARE Extra, but are allowed to choose from any CHAMPUS certified provider.

The first TRICARE capitation model was introduced in 1994 and is in use at this time. In this model the central Department of Defense Health Program (DHP) allocates funds to the Department of Defense and then the Army, Navy, and Air Force Medical Departments. They in turn are responsible for providing health care to their eligible beneficiaries and maintain the medical readiness of the military. The DHP was established specifically to improve overall management of the military health funding system. It is the responsibility of Health Affairs (HA) to allocate CHAMPUS, direct care, operations and maintenance dollars, along with military personnel resources to the Army, Navy, and Air Force Medical Departments using a financially based modified capitation methodology.

Once the U.S. Army Medical Command (MEDCOM) receives its share of the budget from the Office of the Assistant Secretary of Defense for Health Affairs (OASD(HA)), it determines how to further distribute the money to the Army medical facilities. Current resource allocations are based upon a process that reflects each Service's individual requirements yet is consistent with the overall DHP resource allocation framework (Williams, 1994). The Military Departments allocate resources to each of their military treatment facilities based on a modified

capitation methodology, each formula especially designed by the particular services to meet their unique requirements as approved by Health Affairs.

This modified capitation is actually the foundation for the newly proposed Enrollment Based Capitation (EBC) Program. The development of Enrollment Based Capitation for Medical Treatment Facilities represents the next level, and so far the most advanced version of capitation based funding to be used by the Military Health System. The significant difference is that EBC is designed to provide allocations to *specific* Medical Treatment Facilities, whereas the HA capitation model allocated funds to the individual Departments based on estimated user population (Appendix A). This research paper takes a qualitative look at historical budgeting, Enrollment Based Capitation, and their combined impact on Moncrief Army Community Hospital.

**Conditions which prompted the study**

Across the country escalating medical costs and a demand for better access to health care, have been forcing the transition from traditional fee-for-service health care to managed care type organizations. Kongstvedt (1996) describes managed care as a relatively nebulous term used to depict a system of health care delivery that tries to manage the cost, quality and access to health care. The military, as one of the largest providers of health care in this country, is also participating in the transition to a capitated based funding approach to managed care.

Managed medical care was initially developed to control costs and still provide quality health care. However, it was not until 1973, with the passage of the Health Maintenance Organization (HMO) Act, that managed care plans were actually able to increase in numbers and expand enrollments through health care programs. This was primarily due to financial incentives provided by grants, contracts, and loans under the HMO Act. Since then managed care plans

have seen extensive growth and are currently serving over half of the American public (Griffith, 1995).

Moncrief Army Community Hospital was first introduced to managed care when the Department of Defense instituted TRICARE at MACH in 1996. This was part of a nation wide conversion that was implemented on a regional basis. Since then, MACH's budget has been set annually by the TRICARE capitation model.

In the past, military Medical Treatment Facilities were financed on the basis of the volume of services provided. This would include inpatient admissions, number of bed days, ambulatory visits, and ancillary procedures. The more services an MTF was able to provide, the larger its budget (Appendix B). These historical financial incentives are the exact opposite of the incentives needed to support an effective managed care operation in the late 1990s. The Assistant Secretary of Defense (Health Affairs) prepared this statement for a policy memorandum in July of 1993.

*"..The Military Departments have traditionally programmed and budgeted for health programs on the basis of historical resources consumption and workload trends. A limitation to this approach is a built-in incentive to produce more output units, or more services, than may be medically necessary. This budgeting and allocation methodology provides significant disincentives for efficient use of limited resources. For example, hospital Commanders are rewarded with larger budgets for generating more workload without always being held accountable for the necessity of the workload generated."*

EBC is the third of three ongoing elements in the TRICARE managed care program. The first element is the development of the 12 DoD TRICARE Lead Agent regions to manage the MTFs in their respective areas. The second is the implementation of the TRICARE Managed

Care Support (MCS) contracts that provide civilian health care services within each Lead Agent region. And finally, the introduction of Enrollment Based Capitation as the latest method of financing specific facilities based on the number of TRICARE Prime enrollees.

As the final component of the TRICARE program, Enrollment Based Capitation is being implemented by the Military Health System. It is currently programmed to begin in Fiscal Year 2000. At this time the budget allocation of individual Medical Treatment Facilities will be based entirely on the EBC methodology of funding. In order for MACH to survive and prosper in the future, the leadership at MACH will have to understand the intricate details, specific operations and impacts of this new payment system, and manage the hospital within those guidelines.

The evolution from a workload-based resource allocation system to a MTF enrollee based system is designed to give MTF Commanders the ability to maintain full accountability for all the resources used by their TRICARE Prime enrolled populations. EBC is designed to empower MTF Commanders to provide high quality, appropriate, cost-effective health care to their beneficiaries, with a focus on TRICARE Prime enrollees. The Commanders will know precisely which patients they are responsible for, and what their reimbursement rates will be for the care of these patients.

## Statement of the Problem

The problem is to determine effective management strategies that best facilitate the transition to an Enrollment Based Capitation budgeting methodology. There are many tools and systems in place for Commanders to use to monitor the progress of an organization during this transition. This project will look at how these systems function and what information Commanders can glean from those systems in order to achieve financial success under EBC.

It is important to become familiar with the EBC implementation schedule in order to understand how and when management decisions must be made to produce the most beneficial results. 1998 was initially scheduled to serve as an orientation period for EBC and the actual utilization was expected to be implemented in Fiscal Year 1999. Based on information from the most recent MEDCOM Resource Management (RM) Conference held in San Antonio, TX, Fiscal Year 1999 will serve as another adjustment year, and EBC is now scheduled to be fully implemented in Fiscal Year 2000. This time adjustment is primarily due to the difficulty in obtaining accurate data from individual MTFs and calculating an objective and accurate representation of the EBC distribution formula.

Under the current time table during the first quarter of Fiscal Year 1999, EBC scorekeeping will begin at each MTF. EBC scorekeeping is the process of comparing predicted with actual numbers of enrollees and services. Commencing the third quarter of Fiscal Year 1999, DHP funds can be realigned based upon scores of the first two quarters. Starting in Fiscal Year 2000, the EBC model is designated to be the sole basis for distribution of MTF funds by the Defense Health Program. Because of this budget transition, it is imperative that each MTF understand the significance of the associated EBC reporting procedures. This project will compare the practices involved and determine which to maintain and which ones to omit. The paper will also examine the importance of data input and will highlight those areas where the limited resources of MACH can be best utilized in order to optimize effectiveness in health care delivery.

## Literature Review

The literature review will provide continuity for some of the terminology used throughout this paper and establish a setting for some of the philosophies currently employed by managed

care organizations. Curtain (1997) describes managed care as "an arrangement by which a single entity or health plan integrates the financing and delivery of health care for a defined group of people." From Henry Ford's assembly lines to the migrant workers initially covered by Henry Kaiser, this type of integrated delivery system is not a new idea. The objectives of a managed care type systems are also not new. They include improving accessibility, affordability and quality. Even though the emphasis remains on the quality of care the patients are receiving, it is still important to consider the financial budgeting processes of these organizations.

Knickkman (1995) defines capitation as a particular type of payment mechanism. For this specific payment mechanism, providers are paid a specific sum of money for the ongoing care of a person or group of people for a particular period of time. The sum is set in advance of the actual period of service, and it therefore represents a prediction, or at least an agreed-upon estimate, of the amount of money that will be required to provide that care. When payment is based on capitation it is generally linked to some form of managed care and the provider assumes responsibility for the designated care. This is how each MTF Commander, acting as a "provider," will manage their organization as they see fit.

While managing their facilities, the Commanders are responsible for accepting a certain amount of the financial risk involved with a capitated system. In this way the military can be thought of as a staff-model health maintenance organization. According to Kongstvedt (1996) for a staff-model health maintenance organization, the core of the business is to accept the risk entailed by prepayment and to configure care so the costs fall within that prepaid amount. The capitated contract then creates a certain amount of risk for the HMO. It should also be noted that capitation as a payment mechanism is never the single factor in determining the patterns of care. The total effect of capitation depends on many other factors in the organization, such as the form

of the delivery system, the risk relationship, the corporate culture, and the specific physicians' behavior. The literature tends to confound all of these variables, and the studies of capitated payment become studies of other contributing factors in the management of medical care. This project is concentrated in the areas that should produce the most return based on the input factors of EBC.

Capitation also has a significant impact on the quality of care rendered to a patient. Berwick (1996) explains that in theory, capitation might affect the quality of care in two basic ways: by influencing individual decisions, especially on the part of physicians, and by encouraging systemic integration and innovation in the design and delivery of services. Decades of health services research have established that doctors vary widely in their use of diagnostic tests, drugs, therapeutic procedures, hospital admissions, and surgery. Many observers believe that the excessive use of unhelpful procedures is even more common than the practice of withholding effective procedures. This belief implies a need to try and ensure doctors think twice before ordering a test or treatment. In this manner, capitation can place doctors at financial risk for their decisions and become an external pressure on their practice.

In support of this theory Murray, Greenfield, Kaplan and Yano (1992), conducted a study dealing specifically with blood pressure control. They detailed the impact of varying reimbursement incentives, to include capitation, on physician behavior and the simultaneous implications for patients' health outcomes. This is a concern of the military as their physicians operate under a salary based system with few or no incentives to effect their behavior. The study found that patients with capitation style health insurance programs had fewer laboratory tests and lower overall charges than the fee-for-service patients, with no clinical or statistically significant

differences. The study concluded that capitation can result in a reduction in charges without apparent compromise in proximate health outcomes.

Even though a truly integrated care system has enormous potential both to reduce costs and to improve outcomes, it is important to consider that in order for capitation to be effective in the redesign of care processes, the entity paid by capitation, must be capable of achieving such redesign. It may be difficult for the military MTFs to do so because of the limited leverage or capability they possess to change the system. It is important to consider that the effects of capitation on quality and total cost are directly dependent on the type of system of care used. The impact of capitation is also dependent on the competence and willingness of providers and delivery systems to improve performance in their own areas.

It is also important to look at the possible differences in the type of treatment a provider might recommend for a patient based on the type of financial reimbursement system the patient is using. The quality of ambulatory care received by patients who were enrolled in health maintenance organizations which provided care on a capitated payment system as compared to the care received by those participating in a fee-for-service (FFS) system was studied by Retchin and Brown (1990). The study found that recommended elements of routine and preventive care were more likely to be performed for enrollees in staff/group HMOs than in FFS settings. These results were supported by Lurie, Moscovice, Finch, Christianson and Popkin (1989) and again by Lurie, Christianson, Finch and Moscovice (1994) who found that there was no evidence of harmful effects of enrolling elderly Medicaid patients in prepaid plans in the short term. This is an important concept for the military to acknowledge as it begins to become more and more involved with Medicare.

Since its conception, there have been concerns about the effect of managed care on the quality of medical care received by the patients. A study by Swartz & Brennan (1996) concluded that physicians have continued to advocate their use of professional ethics as the main factor of overall health care provided. However, people must also recognize how existing systems regulate care and consider how additional regulation could alleviate some of the potential problems posed by market-based competition. Durfee (1997) concurs that medicine is, at its center, a moral enterprise grounded in a covenant of trust. This covenant obliges physicians to be competent and to use their competence in the patient's best interests. Physicians, therefore, are both intellectually and morally obliged to act as advocates for the sick wherever their welfare is threatened and for their health at all times regardless of the financial outcome.

Not only are physicians asked to make the morally and ethically proper decisions involving their patients, they are asked to make those decisions in a variety of situations. Throughout the medical communities there are specialists and there are general practice physicians. The breakout in the military is no different. The military has numerous treatment facilities that vary from location to location in their size, capacity, capabilities and mix of providers. Because Fort Jackson is principally a basic training post there is primarily a need for primary care providers at MACH. In most managed care systems, specialists have not yet been asked to accept capitation ( Berwick, 1996). The specialists are still generally paid on the basis of some form of FFS system. However, as the pressure to cut health costs and utilization continues, capitation seems inevitable for the majority of the health care systems. The exception may be in those programs in areas where a limited number of providers are able to corner the market in a certain specialty. In addition to quality of care, it is important to remember the cost of services and the particular utilization patterns of each patient population. It is generally desirable

to have a large population, such as in the military, in order to achieve expected utilization numbers. Next, the demographics of the population may be just as important as the population size. An older or poorer population may utilize more services than a middle-aged population. Parshall (1994) indicates that in order to be successful, an organization must determine exactly what services are to be provided, and the quantity of those services it is able to provide before it has to start referring patients. This results in the survivors under capitation funding methodology being those who can provide quality care, reduce costs, and properly manage utilization. If utilization is lower than estimated, the cash flow is positive; if utilization is higher than estimated, the cash flow is negative; and if utilization is much higher than estimated, organizations could end up in serious financial trouble.

**Purpose of the Study**

The principle purpose of this project is to assist Moncrief Army Community Hospital in continuing its mission while it transitions to an Enrollment Based Capitation budgeting environment. The mission of MACH is to fully support the Fort Jackson training mission while providing quality, comprehensive health care, and maintaining a high state of contingency preparedness.

To succeed in the new EBC environment, the MACH Commander will have to redirect the attention, energy, and vision of the hospital. There will have to be an understanding and communication of the new concept of operations under Enrollment Based Capitation. With this new set of economic rules and incentives, comes an opportunity for the Commander to focus on the MTF's cost structure and the integrity of the methods used to calculate the costs of delivering health services. The challenge of managing an enrolled population under a capitated budget includes equal attention to costs experienced both inside and outside of the facility. The

Commander, along with the MTF executive staff, should develop a concept of the MTF's most appropriate menu of services and the correct volume of these services to be offered.

## METHOD AND PROCEDURES

The key personnel at Moncrief Army Community Hospital must have a thorough understanding of Enrollment Based Capitation funding methodology in order to continue the successful completion of its mission. It is the intent of this applied management-oriented research project (Cooper and Emory, 1995) to obtain and disseminate the pertinent management strategies that will assist those personnel in making critical management decisions. This will be achieved by looking at a variety of the systems and practices that are currently being utilized and predicting their impact on the new budgeting methodology.

The methodology used for this project was to review a variety of the systems and practices currently being used at MACH, predict the impact of these systems during the transition to EBC, and recommend any necessary modifications to facilitate the transition to EBC.

The majority of the evaluated systems can be separated into one of three broad categories. The first is the challenge that MACH faces in being able to maintain accurate workload data and receive the proper credit for the services provided under EBC. This includes evaluation of the Ambulatory Data System (ADS), EBC scorecards, and treatment of active duty soldiers not meeting the enrollment catchment area criteria. The second category addresses the ability of MACH to improve its access standards for those enrolled in TRICARE Prime. Areas assessed in this category include a Nurse Advice Line and redistribution of Emergency Room assets. The third category is overall efficiency of the organization; an area where information systems and the EBC PLANNER will be addressed.

## RESULTS

As mentioned in the introduction, MACH currently receives its annual budget from the U.S. Army Medical Command. The MEDCOM uses a budgeting methodology that separates the total budget into two categories, noncapitated and capitated. The noncapitated portion is for those costs which are independent of the population served. This includes such areas as education and training, laboratories, veterinary services, dental services and occupational health. The capitated money is for costs which are dependent upon the beneficiary population. The beneficiary population is the number of eligible members within a 40 mile radius catchment area of each MTF. Only the capitated funds are considered in this paper and they include standard CHAMPUS, managed care support contracts, information systems and the medical facility core budget.

When the EBC formula is incorporated, it will contain essentially three primary elements, and total funding will be calculated as shown in Table 1.

Table 1

The Enrollment Based Capitation Formula

| | |
|---|---|
| | Basic MTF Prime Enrollment Capitated Funds |
| | (+) |
| (+) | Services provide to external customers |
| (+) | MTF Medicare allocation from parent Service |
| (+) | Military Service / MTF special funds |
| (-) | Prime enrollees referred out |
| = | Total MTF Capitated Funding |

Note. Basic MTF funds are PMPM based on TRICARE Prime enrollment.

The first element is a per member per month (PMPM) premium earned by the MTF for each TRICARE Prime patient enrolled. Next, additional revenues can be earned by the MTF for providing care to non-TRICARE Prime space-available patients, otherwise known as "external customers," if the MTF's capacity permits. Finally, MACH will be billed for TRICARE Prime patients that are referred out to other facilities.

The earning of revenues and the purchasing of care will be reconciled on a monthly basis. This will be accomplished at all levels of the MHS and could result in a transfer of DHP funds within and between the Military Medical Departments. The EBC reconciliation process should provide timely and useful management within he Regional Managed Care Support (MCS) contracts.

For EBC, the number of enrollees in TRICARE Prime will be a significant contributing factor in the individual MTF budget equation. This is one of the areas that each MTF will have some individual control over, and must be monitored closely. The enrollment will have to be managed at each facility and controlled by marketing and accessibility. For EBC budget calculation purposes TRICARE Prime enrollees will also be given a numeric value based on their demographic background. This number is based on factors such as age, sex, beneficiary category, and military service, and is called their "equivalent life" value, see Appendix C.

MACH will have little or no control on the set capitation rates; the per-member per-month rate (PMPM) received will be based on the equivalent life values of the number of patients in our catchment area. In the civilian market, the total capitation for an internist will generally run between $11 and $14 PMPM for a commercial population patient (Spong, 1996).

EBC also relies heavily on data input from MTFs. Commanders must realize this and include data integrity as a top priority in their planning process. The foundation upon which the

EBC formula is built consists of mature, standardized, and fully developed data systems. It is these data systems that must provide complete and accurate information to the EBC model.

MACH is currently in the final stage of an amazing turn of events concerning one such data system, the Ambulatory Data System (ADS). MACH has tripled its Ambulatory Data System reporting compliance rate in the last year. This turn around is primarily due to the creation of an office solely responsible for insuring compliance with ADS data reporting requirements. The Ambulatory Data System obtains patient demographic, insurance, and appointment information from the Composite Health Care System (CHCS) and prepares an encounter form for each patient appointment. The forms are then completed by the provider who enters the diagnoses and treatment information. The final step is to scan the bubble sheets into the computer and ensure they are properly edited. This allows for tracking of procedures performed in each clinic. The data is also monitored by MEDCOM to track facility workload.

In April of 1997 Moncrief Army Community Hospital had an overall reporting compliance of less than 30%. This means that MACH only received credit for one-third of the total outpatient procedures performed in the facility. At that time the ADS scanning and input was being conducted by individual clinics and there was a wide discrepancy in the quality of data input. In January of 1998, multiple third part collection ADS forms were discovered in a file of forms to be destroyed. This small number of forms ranging over a short period of time (33 forms over 22 days) could have resulted in lost third party revenues of $3,684. Further interpolation of the dollar amount and time period leads to annual projected loses of nearly forty-four thousand dollars. Assuming this error was occurring to a similar degree in the other clinics, the annual potential losses could be up to three times that amount.

As a result of these findings, an ADS proficient individual was immediately identified to manage a centralized ADS processing office. Additional ADS scanning machines were ordered and quickly put into operation in each major clinic. Duties and responsibilities of the central ADS office are continued in the discussion portion of this project.

The Commander has always been accountable for the data generated by his or her facility, but now the visibility of EBC scorecards and MTF price lists will make it much easier to assess the level of command emphasis being placed on information systems. Monthly EBC scorecards are currently being reported in the Corporate Executive Information System. The EBC scorecards report on four categories of financial data: earnings for care provided to external customers (patients not enrolled at the MTF), Medicare allocations, Prime capitated earnings based on MTF enrollment, and outside care purchased for MTF enrollees. A sample of the CEIS output data for MACH can be seen in Appendix D.

An important portion of the EBC workload equation is the consideration of patients treated but not enrolled in the MTF catchment area. MACH is located at Fort Jackson, South Carolina and has a unique mission that separates it from the majority of other MTFs in the military. MACH serves as the medical initial entry screening and treatment facility for over 40,000 troops who enter the Army each year. Because of their transient nature, these soldiers in training or SITs, are not considered enrolled in our catchment area, yet are still provided care in our facility. This is of significant importance because it impacts how MACH will be budgeted for services provided during the reconciliation process of EBC. The reconciliation process will involve the computing of monthly estimated revenues, and a comparison to actual revenues. Unless a correlation factor is used to modify the quantity of care received by our SITs, the

scorecards may not reflect accurate figures. The resulting MTF EBC scorecard will then impact how the Regional Lead Agent redistributes funds.

Access to care is another important issue at Moncrief Army Community Hospital. MACH is currently in the process of restructuring its organization to better accommodate the principle users of the facility, those requiring non-urgent care. This will be accomplished by shifting resources from the emergency care arena to supplement the delivery of non-urgent primary care. The Emergency Room will close at MACH on 1 October, 1998. The money previously used to support the ER physicians and support staff contracts, along with the space occupied in the hospital, will be reallocated to the Family Health Center (FHC). The FHC is MACH's primary access point of care for our TRICARE Prime beneficiaries. The money will be used to procure additional providers and increase the number of appointments available for the patients. This will improve overall access to the Family Health Center.

In addition to expanding the number of available appointments, MACH is going to update the telephone appointment system to facilitate access to appointments. The telephone appointment system will be used in conjunction with the Health Care Information Line (HCIL). The HCIL is a TRICARE supported telephone triage system that uses registered nurses to provide medical advice. This system is being established in order to provide more convenient access to the MACH health care system. The HCIL will transfer beneficiary calls to the Moncrief Army Community Hospital appointment system or the on-call health care provider, which ever is appropriate.

One method to use in considering whether or not to upgrade communication and information systems is to calculate the Return On Investment (ROI). However, it is difficult to calculate the Return On Investment on these types of systems because of extraneous factors like

cost avoidance and quality of care improvements. Even if the formula is kept simple and only compares total cost versus anticipated savings, the savings are difficult to quantify. Common sense dictates there will be an improvement in patient care, but the difficulty lies in putting a dollar value on the improvement. It is also difficult to determine if information systems provide sufficient returns to cover their cost because they do not generate revenue like other business investments. Many times the dollars spent on the study alone will constitute a large deduction from the profits. Even with consideration of all these unknowns, the standard industry investment in information technology is currently around three to three and a half percent of an organizations total budget. Moncrief Army Community Hospital currently spends and estimated two per cent of its total annual budget on such upgrades.

An analysis of the current automated data reporting systems reveals that MACH is progressing in the right direction but still has a way to go before reaching its goal of a totally compatible system. Moncrief Army Community Hospital is continuously updating its information systems in order to maintain pace with current operational demands and modern technology. MACH has a number of automation projects that include; installation of an updated version of CHCS, video-teleconferencing capability, upgraded telephone switching device and implementation of the Windows based Computerized Accounts Payable System.

Many times the difficulty lies in the compatibility of two data systems. MACH is experiencing such a difficulty with two of its systems. There is a variance in the number of enrollees between the CHCS and the DEERS systems. As shown in Appendix A, there is a large discrepancy (724 people) between the number of Active Duty enrollees reported in the DEERS and the CHCS systems. This is important to note because the DEERS enrollment figures are the numbers EBC will be using in its budget formula.

EBC is a new system that will take users some time to get acquainted with its peculiarities. Vector Research, Inc. was contracted to develop a software program to aid in understanding EBC and predicting its impact at a particular facility. The result was the development of a program called the EBC PLANNER (Program Linking Annual Network Needs and Enrollment Resourcing). The EBC PLANNER is designed to take the unique input from a facility and organize it in a manner that assists the user in conducting resource management decisions, market analysis and financial management decisions. The use of the EBC PLANNER is optional and MACH has not dedicated the required resources to enter the data and begin use of the EBC PLANNER.

In order for MACH to beginning using the EBC PLANNER a number of initial data inputs must be made into the program. The initial data includes; hospital referral patterns, organizational workload practice patterns and capacity, current and projected enrollment figures, and current utilization rates. The EBC PLANNER works by consolidating the data and forming correlations between the information in order to answer specific questions. The outputs include DRGs based on enrollment, comparison of capacity versus workload, and outsourcing excess demand to the cheapest alternative. The pros and cons of using the EBC PLANNER will be addressed in the discussion section.

If the EBC PLANNER is used to predict enrollment numbers, then effective marketing techniques must be used to meet or exceed those predictions. A simple marketing strategy and a health care specific life cycle method has been developed by Conlon (1997). His market evolution model deals specifically with the evolving market of managed care. The model is divided into four different stages as shown in Table 2. Moncrief Army Community Hospital is considered to be in stage two of the cycle. During stage two, MACH should focus on continuing

to build physician networks and enrolling new members as a top priority in order to ensure success as the managed care market continues to develop and EBC comes to fruition.

Table 2.

| Characteristic | *Stage One* | ***Stage Two*** | *Stage Three* | *Stage Four* |
|---|---|---|---|---|
| **Type of Market** | Unstructured | Loose and fragmented | Consolidating | Tight |
| **Degree of Managed Care** | Very little penetration | Growing presence | Increasingly Competitive | Very Competitive |
| **Characterization of Market** | Immature Market | Growth Market | Maturing Market | Mature Market |

Moncrief Army Community Hospital is only in stage two of the marketing plan, but the local civilian community is slightly more advanced and in stage three. MACH is still trying to build up its clientele while some of the non-military organizations are working to make their services unique. Not being at the same stage as our civilian counterparts puts MACH at a disadvantage when it comes to marketing to our customers. There has also recently been a substantial amount of bad press concerning military medicine and HMOs in general. This media back-lash also makes positive marketing difficult at MACH.

## DISCUSSION

The distribution of Fiscal Year 1999 Defense Health Program Funds to the individual Services will be based on historical budgeting. Health Affairs will then allocate the appropriate dollars to the U.S. Army Medical Command. The MEDCOM is then responsible for budgeting the individual medical treatment facilities. The funds will be labeled using EBC scorecard categories, with space available care projections used to reconcile the old allocation method (user based) with the new EBC mechanism. These medical treatment facilities will receive approximately the same budget amount they would have received before EBC. This should ease

the conversion from a fee-for-service (workload) based system at the local level, to an enrollment based (capitated) strategy. The following year, Fiscal Year 2000, the initial allocation of DHP funds will be based on the EBC protocols and targeting.

In order to understand how management strategies will differ with the new funding methodology, there will be a discussion of some basic economic principles. In every type of service organization there are two types of costs to consider, they are fixed and variable costs. Fixed costs are those costs that do not change with output within a certain time frame. Fixed costs are shown as a horizontal line in Figure 1. Variable costs, on the other hand, increase as output or amount of services increase (Jacobs, 1991). Combining variable and fixed costs results in the total operating cost of an organization. A general break down of the fixed versus variable costs at MACH is shown in Appendix E.

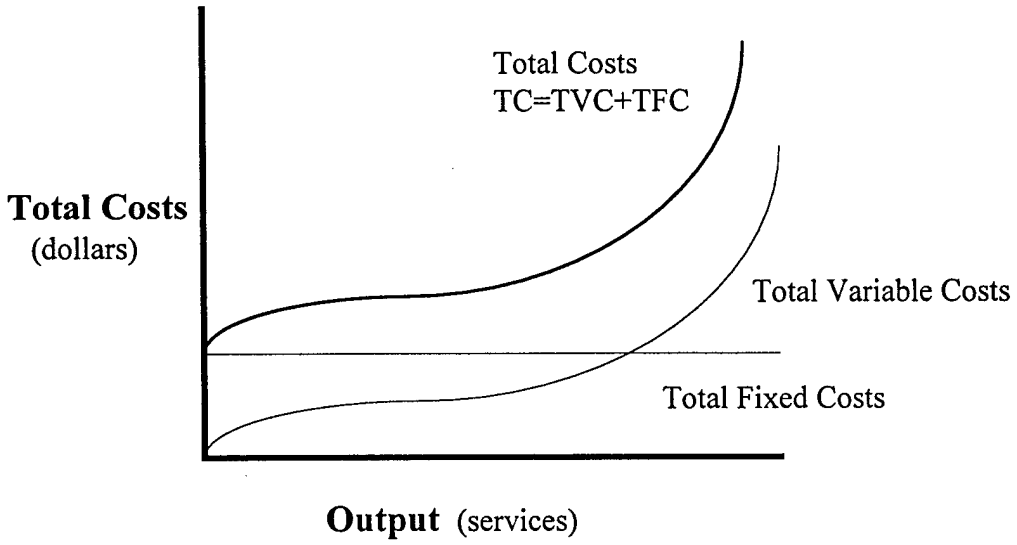



Figure 1. Relationship between Total Costs, Variable Costs and Fixed Costs

Once the total cost curve is established for each organization, it can be applied to both types of payment systems, capitated and FFS. In the traditional fee-for-service system a positive cash flow or profit is realized by performing a greater number of services. This is

because the total revenues increase as the number of visits or services increase up to a point where they exceed the total cost as shown in Figure 2.

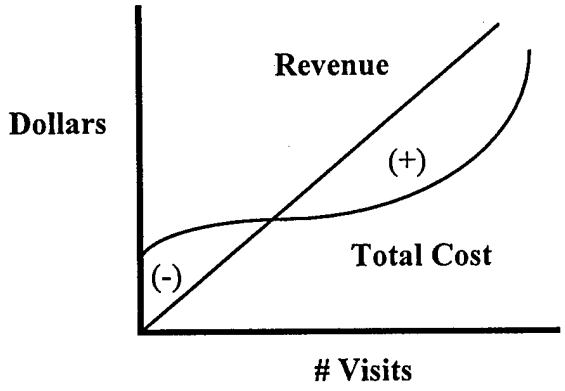



Figure 2. Cash flow in a fee-for-service (workload) system.

Conversely, in a capitated system the revenues are basically constant for any organization and the costs increase to a point where the organization begins to loose money. And as will be the case for the military under Enrollment Based Capitation, the key to a positive cash flow will be the controlling of costs (Figure 3).

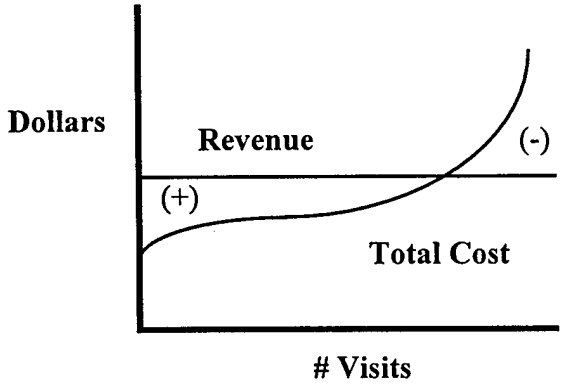



Figure 3. Cash flow in a capitated (wellness) system.

In the past, many health care systems possessed the 'churn and earn' mentality. The more patients treated, and the more procedures or tests referred, the greater the profit realized.

Therefore under a FFS payment system, the cost of health care and the method of compensation can be considered factors effecting the access to care. Today's public opinion is that the process is being reversed (Griffith, 1995). In a capitated system the patients are concerned they may not be receiving all the care or treatment they believe they deserve. With the implementation of EBC, MACH will have to ensure patients continue to receive the proper care and manage its capitated assets accordingly.

The Army, Navy, and Air Force Surgeons General staffs are developing a self insurance mechanism in case a treatment facility is unable to keep its total costs below total revenues. This pool of insurance money will compensate MTF's against catastrophic costs experienced by their enrolled beneficiaries. Each Service will set thresholds for when the reinsurance pool is activated. Obviously, the higher the threshold, the more dollars would be available in each MTF's capitated rate. In order to accurately determine costs under this type of methodology, it is important to understand the linking of patient enrollment status and occasions of service. MACH uses ADS to track the services it provides.

The recent formation of a centralized ADS processing office with an ADS facilitator at MACH has resulted in a significant increase in the overall ADS compliance reporting, see Appendix F. The central ADS office currently boasts an overall ADS reporting compliance of over 96%. A system has been instituted that encourages data entry, scanning, coding, and editing at the user level. Duties and responsibilities of the centralized office include the training program and a help center. The ADS help center is designed to solve unique ADS problems and facilitate the creation of customized templates for individual clinics. The system allows for on the spot corrections and has expedited processing to the point that most forms are entered into the ADS computer system within 72 hours. This lends to direct and indirect financial support to the

hospital. Direct results can be seen by both the increase in number of third party collections, and the decrease in amount of time it takes to process those returns. The indirect financial compensation achieved over the long run will see MACH receive accurate credit, and therefore accurate financing, for the services it provides. In addition to providing a tool to more precisely monitor the workload at MACH, a smooth running system also improves the attitude and morale of the users. This positive feedback results in more efficient data input, less time spent completing paper work and more time spent seeing patients. The stellar performance and individual motivation of the ADS facilitator in charge of the ADS office was responsible for the majority of the success of this program.

Another important workload consideration for the MTF Commander and the hospital staff is if they intend to expand their services, and if so, in what direction? Some organizations expand along the channels of distribution, also known as vertical integration. Vertical integration is considered forward if it grows towards the patient, and backwards if it moves towards the suppliers. On the other hand, horizontal integration is growth within a market or sector. A common example of horizontal integration is the acquisition of competitors. By expanding control in a particular market, organizations can increase profits by minimizing the competition, and utilize economies of scale to decrease costs. The majority of military health care organizations are expanding horizontally. A good example is the central logistics distribution center being considered by the Army Southeastern Regional Medical Command. Simultaneously, the in house services are shrinking vertically as MTFs are providing less and less types of specialty care.

In order for the providers at the MTFs to provide the best possible care for their patients, they need to have access to all the information pertaining to their patients' health. They must be

able to utilize all available resources for research and treatment (Appleby, 1997). Part of this access to information is the availability of up-to-date and efficient information systems. There is no doubt of the critical impact modern information systems are having on the health care industry. Especially as many organizations are transitioning into the managed care arena (Bazzoli,1997). Those systems will be vital at MACH as the data for EBC is extracted from them for future budgeting purposes.

However, it is difficult to place a financial value on information data systems. The Return On Investment (ROI) method is a good financial analysis tool but it is difficult to employ at MACH at this time for two reasons. First, under the current Resource Management tracking techniques, it is an ominous task to accurately determine the amount of funds being spent on upgrading automation systems. Second, as mentioned in the results section, it is difficult to calculate the actual savings provided by the installation of any new or upgraded system.

The cost of information systems should be considered as part of the cost of providing health care and associated with costs similar to those of telephone maintenance. These costs are considered part of the infrastructure of the organization and are justified in order to maintain the expected or standard level of service. The information systems need to be as modern and up-to-date as possible, but should only be purchased for the right reason. That is because they make good common sense financially, and add to the quality of service.

Another factor making ROI difficult to use is the determination of the length of time to use as a payback period. The standard rule of thumb for ROI is three years. Many information systems do not provide immediate, tangible returns and should be looked at for a longer than normal payback period, perhaps as long as ten years. This problem becomes even more complex when a system is already in place and the organization is simply upgrading to a more current or

faster system. This is when Commanders must make decisions that will benefit the facility in the long run, and not just during their tenure. Even though they are hard to cost-justify, there are many indirect benefits modern information systems provide that make it imperative to try and remain on the cutting edge of technology. The indirect benefits are listed in the recommendation section of this paper.

A recent addition to the many information system resources available to the military is the EBC PLANNER. The EBC PLANNER is designed to take the unique input from an organization and assist the user in conducting resource management decisions, market analysis and financial management decisions. However, the EBC PLANNER must only be used as a tool because there are other factors not considered in the EBC PLANNER formulas that will have an additional impact on the ultimate outcomes. The EBC PLANNER can only be successfully used if an EBC PLANNER information team is created. To input all the needed data into the original data bank requires input from a myriad of different sections in the organization. MACH has not dedicated the resources to complete this initial data input at this time, but that is one of the recommendations of this project.

The patient flow management aspect of the EBC PLANNER is designed to assist in managing the access standards in TRICARE. The key to access is managing the demand. Without preventive medicine, education and proper triage, demand for health care services would be unlimited. Patients continue to demand services they perceive might help relieve whatever condition ails them. Because advances in medical technology and the tremendous success of today's medical practices have been well documented in the media, suffering patients believe in the magic bullet theory. They believe that doctors and new medications can cure all their problems. Providers do want their patients to recover quickly and to be satisfied with the

treatment procedures. These two similar yet opposing forces, patient and provider demand, guarantee an unlimited demand for health care resources (Jacobs, 1996). Because of limited resources such as time, number of providers, and financial support, the challenge for manage care organizations is to regulate this unrestricted demand in a clinically sensible, medically sound, and patient friendly manner without increasing the risk of adverse outcomes.

The EBC PLANNER also has a tool for purchased care outsourcing. The decision to make or buy a particular service is a question often asked of financial officers. The current trend in hospitals is towards contracting support services for a facility, as opposed to providing them internally, is called outsourcing. Outsourcing is not a new idea, but a management technique that is being implemented more and more often. In a recent survey conducted by Hensley (1997), it was found the total number of management contracts rose by 45% from 1995 to 1996. This included contracts with hospitals, nursing homes and physician clinics. The primary goal of outsourcing is to cut costs and boost service quality. These objectives are achieved because a contractor can employ economies of scale to reduce costs and utilize specialists to provide quality service.

The Resource Management Division supervises the majority of the contracting at MACH. There are many important ideas to consider when contracting. One is to insure short-term contracts are used while ensuring the contracted service matches the specific needs of the organization. Another idea is to use customer satisfaction as a tie to contractor compensation rates, therefore implementing a type of incentive program. Many hospitals believe that what they do best is provide health care and look for others to handle the infrastructure. Because of the arrangement of the military health care system, and how it is designed to support the service members and beneficiaries, the free market competition technique has limited uses. The

contracting methods used by the Defense Health Program and its associated bureaucracy are often slow and difficult to change.

One of the services MACH has considered purchasing is a nurse advice line. In order to have a successful nurse advice line there are some important issues to consider (O'Connor, 1996). They include physician acceptance of the nurse's role as a provider, timely and efficient communication system between physician and nurses, patient acceptance, and the selected system must have the ability to answer both patient questions and make patient appointments. Education and marketing of such a system is key to ensure proper utilization. Patients would have to be informed that in order for the advice line to perform at its maximum efficiency, they will have to follow the correct steps when seeking assistance for their particular question or problem.

A new telephone answering and appointment system would definitely provide a more convenient access to the health care available at MACH. A key role will be the marketing of the telephone system to the eligible beneficiaries. It will be a considerable challenge to change practice patterns that have been in place for a substantial period of time. Closure of the Emergency Room will provide an excellent opportunity to introduce a new and improved access procedure to the customers.

## CONCLUSIONS AND RECOMMENDATIONS

Moncrief Army Community Hospital will be able to adapt its current budgeting management style to a style that will be successful in the Defense Health Program's proposed funding methodology, Enrollment Based Capitation. MACH will be able to make the transition because of the flexibility of the systems already in place in the organization.

MACH is currently experiencing an influx of new personnel in key management positions. These leaders will have to quickly assess the situation and make decisions to support the transition. This project is intended to serve as an additional resource for the Commander and staff in order to make the best decisions possible. The people in key management positions will also have to review the important management skills they have developed over the course of their careers and apply these skills when implementing the new management strategies.

The mission and vision of the organization become even more important during a time of transition because they effect the attitude of the employees. Studies indicate there is a direct correlation between employee satisfaction and patient satisfaction (Sherer 1997), and patient satisfaction should remain the ultimate goal of the hospital.

MACH will have to make a few changes to ensure success. Some changes are already taking place, such as the transfer of assets from the emergency room to the Family Health Center. The shift of assets will be used to provide improved access to care for the primary users of the medical facility. Other changes include the installation of more efficient and accurate information systems, and the addition of new appointment services designed to improve access. Once the changes are made it will be important to educate the users and market the new services. Another recommended change is the implementation of the EBC PLANNER at MACH. The success of these recommended changes depend on the willingness of the organization to modify its structure and operating procedures.

The military health care industry is a very data-rich and information poor environment in which there are an inordinate number of data systems available. The key to future success at MACH will be the ability to run software capable of integrating the different data systems. This is not so much a local problem as it is a challenge to the entire DHP. Once the proper software is

implemented, it will allow the Commander and his staff to spend more time analyzing data and not waste their time and resources gathering it.

The MTF and the Managed Care Support contractors must work together to ensure essential data systems are set up properly and utilized to their full extent. Critical systems at MACH are the Defense Enrollment Eligibility Reporting System (DEERS), Comprehensive Health Care System (CHCS), Ambulatory Data System (ADS), and the Corporate Executive Information System (CEIS). MACH will have to use these systems to closely monitor the demographics of who is enrolled in the various TRICARE options. It will also have to continue to track which services are being utilized by which segments of the user population for workload purposes. The Medical Expense and Performance Reporting System (MEPRS), which is used for billing purposes, will take on new importance as many of the prices that MTFs charge for their services are based on expenses and workload reporting produced by this system. MACH should continue to upgrade these data systems as new versions come out and continue to train new users.

Automation system upgrading will result in direct and indirect financial benefits. The indirect financial returns can be categorized into two classes, short and long-term. There is an immediate return by linking providers to more effectively accommodate managed care contractors. This is accomplished by putting more information at the point of care by registering patients and immediately determining their eligibility for benefits. MACH can do this via its automated patient tracking and enrollment data system, DEERS. The more long-term benefits are related to revenue and profitability that involve providing information to facilitate automated billing in DEERS. This can reduce both the amount of time to process a bill and the number of redundant bills that must be sent. Both techniques could be big money savers. MACH should

follow the ideology of Jean Balgrosky, Vice-President of Information Resources at Holy Cross Health Systems who summarizes it best by saying " In today's world, time to market-speed-is everything." Because this philosophy on system speed is so dependent on the information system and its data, information systems are going to deserve special attention as the data becomes more relevant to our overall budgeting process (Bazzoli, 1997).

With the onslaught of capitation and a renewed emphasis on cost containment, MACH will have to consider the value added of new information systems before they purchase them. The hospital should not be overly concerned with determining a Return On Investment for its present equipment, but should begin to more accurately track the amount of money spent on future purchases. This will allow a quantitative financial analysis to be completed in the future. The financial tracking should be accomplished through the new division level budgeting system that is being initiated at MACH. EBC reporting will require some system upgrades to be mandatory (i.e. ADS, CHCS and MEPRS), others will have to be selectively chosen by the organization (i.e. EBC PLANNER). Some managers believe there must be a quantifiable return on data information investments. Others believe that spending money on information systems is just the cost of doing business, and the returns will justify themselves in the long run. This is latter is true in the military and at MACH, especially as they transitions to a budget system that is so dependent on accurate data. MACH currently uses many older data information systems. The intercommunication between these systems, along with accurate and timely data processing, are key factors to monitor ensuring the hospital receives the workload credit it deserves.

Once sufficient information and access systems are in place, it will be time to market the excellent services that are available at MACH. In the process of marketing a product or service, it seems the only thing that remains constant is change. MACH must be ready to continually shift

its health plan marketing strategy between the acquisition new members and the retention of current members.

It is difficult to conduct a quantitative analysis in the area of preventive medicine. Preventive medicine has not been mentioned before but healthy lifestyles obviously reduce the amount of overall demand for health care. A decreased demand for health care helps in controlling costs and improving access. MACH must continue to work with the TRICARE contractor to ensure health lifestyle programs, such a smoking cessation classes, are an integral part of the working relationship. The military has always been one of the leaders in the practice of using preventive medicine and promoting health lifestyles to assist in maintaining a healthy population. This is even more apparent now as the Army is placing considerable emphasis on its Putting Prevention Into Practice (PPIP) program. MACH has a strong preventative medicine program to include disease monitoring and vaccination programs. MACH should continue its aggressive approach in preventive medicine, and it will continue to reap the benefits.

Efficient utilization of assets and resources is an effective way to monitor workload in any business. Utilization management should serve as the watchdog at MACH to control the over and/or under utilization of resources, this is the objective of a utilization management program (Eastaugh, 1992). Utilization management is designed to determine if the patient's dilemma requires a particular service and if so, is the appropriate service being provided by the physician? It is important to remember that although the rules for utilization management are clear and specific, they are also open to comment and change, therefore insuring the program keeps up with the advances in medicine. All this will help maintain quality and control costs.

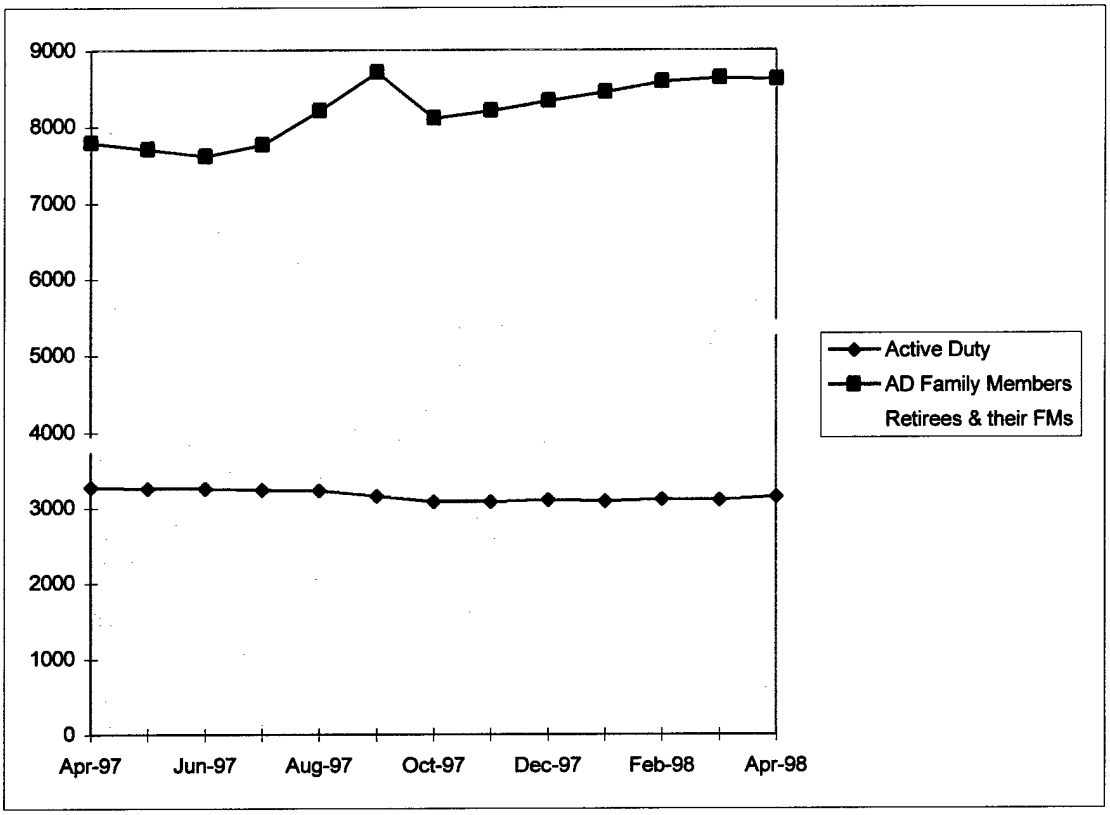
MACH needs to begin using the Program Linking Annual Network Needs and Enrollment Resourcing software better known as the EBC PLANNER. The EBC PLANNER is

designed to organize resources and assist Commanders in budget decision making. It contains programs to determine what services to fund, aids in make or buy decisions, and helps decide which method to use when acquiring scarce resources. The EBC PLANNER can also be used for provider network management by tracking practice and referral patterns of physicians. However, to effectively use this tool an EBC support team will have to be constructed. They will input the various data to initially run the program with and configure it to accurately represent Moncrief Army Community Hospital. From that point on, an EBC PLANNER expert will have to be the single point of contact to ensure a consistent updating of the data. Once a system is in place and some historical data entered, the EBC PLANNER should be a valuable asset.

Although the military budget process sometimes seems like a limbo dance where the budget bar keeps getting lower and lower, MACH is in a position to dance underneath it. Capitation has been used for the distribution of Defense Health Program Funds for some time now. So far it has been used only to separate money between the services and not down to the MTF level. EBC however, is based primarily on the number TRICARE Prime enrollees at each MTF facility and will then allocate the money accordingly. Moncrief Army Community Hospital is already taking steps to prepare for EBC. As the military takes capitation one step further and implements Enrollment Based Capitation, MACH will still be able to perform its mission of providing quality care to its entitled beneficiaries and maintain the medical readiness at Fort Jackson.

Appendix A

CHCS / RAPS enrollment data over the last year.



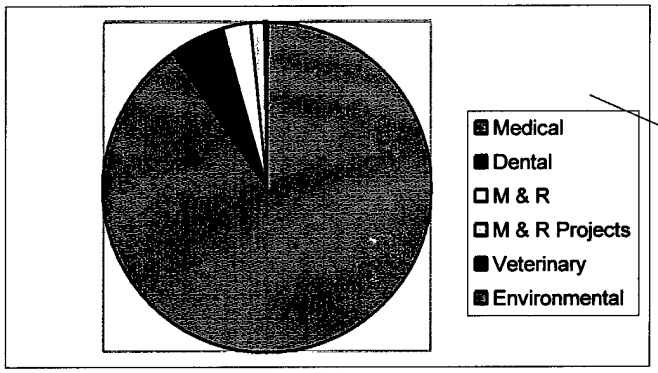

Note: Discrepancy between CEIS/DEERS and CHCS/RAPS data.

| CEIS/DEERS | | CHCS/RAPS | | Difference |
|---|---|---|---|---|
| AD | 2,425 | AD | 3,149 | -724 |
| AD FM | 8,383 | AD FM | 8,627 | -244 |
| Retirees | 5,291 | Retirees | 5,361 | -70 |

Appendix B

Total MACH Financial Resources for FY 97

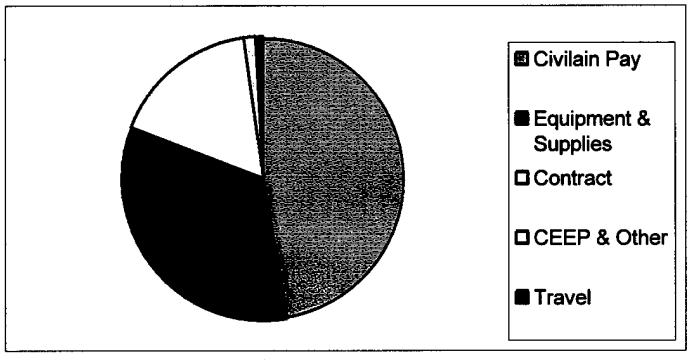
| Category | Amount | Per Cent |
|---|---|---|
| Medical | *35746* | 90.3% |
| Dental | 2124 | 5.4% |
| M & R | 1103 | 2.8% |
| M & R Projects | 492 | 1.2% |
| Veterinary | 89 | 0.2% |
| Environmental | 31 | 0.1% |
| **TOTAL DHP** | **39585** | 100.0% |




Note: Dollar values x 1000

MACH Medical Financial Resources for FY 97

| Category | Amount | Per Cent |
|---|---|---|
| Civilain Pay | 16910 | 47.3% |
| Equipment & Sup | 12032 | 33.7% |
| Contract | 6012 | 16.8% |
| CEEP & Other | 457 | 1.3% |
| Travel | 335 | 0.9% |
| **TOTAL Medical** | **35746** | 100.0% |




Note: Dollar values x 1000

Appendix C

Moncrief Army Community Hospital EBC enrollment status

**Raw Data**

| Female / Male | 0-17 / 0-17 | 18-44m / 18-37m | 18-44s / 18-37s | 45-64 / 38-64 | 65+ / 65+ | Total |
|---|---|---|---|---|---|---|
| F AD AIR FORCE | 0 | 1 | 0 | 0 | 0 | 1 |
| F AD ARMY | 0 | 245 | 343 | 22 | 0 | 610 |
| F AD FAMILY MEMB | 2,607 | 203 | 2,358 | 182 | 0 | 5,350 |
| F AD NAVY/USMC | 0 | 1 | 1 | 0 | 0 | 2 |
| F RET AIR FORCE | 0 | 1 | 4 | 3 | 0 | 8 |
| F RET ARMY | 0 | 12 | 20 | 41 | 0 | 73 |
| F RET FAMILY MEMB | 572 | 261 | 547 | 1,452 | 7 | 2,839 |
| F RET NAVY/USMC | 0 | 1 | 0 | 5 | 0 | 6 |
| M AD AIR FORCE | 0 | 1 | 9 | 14 | 0 | 24 |
| M AD ARMY | 0 | 265 | 1,064 | 449 | 0 | 1,778 |
| M AD FAMILY MEMB | 2,582 | 181 | 169 | 101 | 0 | 3,033 |
| M AD NAVY/USMC | 0 | 0 | 7 | 3 | 0 | 10 |
| M RET AIR FORCE | 0 | 1 | 3 | 221 | 0 | 225 |
| M RET ARMY | 0 | 1 | 12 | 1,129 | 0 | 1,142 |
| M RET FAMILY MEMB | 587 | 241 | 7 | 25 | 0 | 860 |
| M RET NAVY/USMC | 0 | 0 | 2 | 136 | 0 | 138 |
| Total | 6,348 | 1,415 | 4,546 | 3,783 | 7 | 16,099 |

**Equivalent Lives**

| Female / Male | 0-17 / 0-17 | 18-44m / 18-37m | 18-44s / 18-37s | 45-64 / 38-64 | 65+ / 65+ | Total |
|---|---|---|---|---|---|---|
| F AD AIR FORCE | 0 | 1 | 0 | 0 | 0 | 1 |
| F AD ARMY | 0 | 316 | 381 | 26 | 0 | 723 |
| F AD FAMILY MEMB | 1,725 | 158 | 2,452 | 224 | 0 | 4,559 |
| F AD NAVY/USMC | 0 | 1 | 1 | 0 | 0 | 2 |
| F RET AIR FORCE | 0 | 1 | 5 | 4 | 0 | 10 |
| F RET ARMY | 0 | 15 | 26 | 56 | 0 | 97 |
| F RET FAMILY MEMB | 377 | 188 | 443 | 1,473 | 11 | 2,492 |
| F RET NAVY/USMC | 0 | 1 | 0 | 7 | 0 | 8 |
| M AD AIR FORCE | 0 | 0 | 4 | 8 | 0 | 12 |
| M AD ARMY | 0 | 151 | 564 | 305 | 0 | 1,020 |
| M AD FAMILY MEMB | 1,852 | 58 | 101 | 81 | 0 | 2,092 |
| M AD NAVY/USMC | 0 | 0 | 3 | 2 | 0 | 5 |
| M RET AIR FORCE | 0 | 2 | 4 | 202 | 0 | 208 |
| M RET ARMY | 0 | 2 | 15 | 1,231 | 0 | 1,248 |
| M RET FAMILY MEMB | 384 | 101 | 2 | 20 | 0 | 507 |
| M RET NAVY/USMC | 0 | 0 | 3 | 126 | 0 | 129 |
| Total | 4,338 | 995 | 4,004 | 3,765 | 11 | 13,113 |

Note: Data accessed from DEERS via CEIS.

Appendix D

**EBC MTF Scorecard for MACH**

| | Annual Projection | Monthly Projection | Actual Earnings | Annual Difference | Monthly Difference |
|---|---|---|---|---|---|
| External Customers | 7,951,000 | 789,017 | 507498 | -281,519 | -35.68 |
| Medicare Allocations | 4,132,000 | 344,333 | 344,333 | 0 | 0.00 |
| Prime Cap Earnings | 41,705,000 | 3,348,983 | 3,236,099 | -112,884 | -3.37 |
| Purchased Care | -5,133,000 | -427,750 | -70,033 | 357,717 | 83.63 |
| TOTAL | 48,655,000 | 4,054,583 | 4,017,897 | -36,686 | -0.90 |

Note: Report extracted from CEIS to monitor projected and actual earnings and expenses for individual MTFs.

Appendix E

MACH Medical Contracting Financial Resources FY 98

(Catagories in **bold** are fixed costs with annual contracts in place)

| Category | Amount |
|---|---|
| Medical Library | 1,758 |
| DHCPP - BPA Nursing | 42,218 |
| Child Care Svcs | 7,613 |
| **NMED Svcs - (TRICARE)** | **170,688** |
| Radiology - BPA | 10,000 |
| MRI Reimb - (VA) | 302,727 |
| Sup Care - Cardio | 15,000 |
| Supplemental Care | 610,000 |
| **Pathology Svcs** | **57,196** |
| **Int Med (TRICARE)** | **60,300** |
| **EIP - OT/PT** | **18,630** |
| **Dept OB (GATEWAY)** | **831,093** |
| Active Duty OB | 221,410 |
| **ER Contract** | **665,013** |
| Registratation Fees | 26,200 |
| Accreditations | 3,039 |
| **Association Dues** | **2,064** |
| Active Duty Claims | 270,000 |
| Support Functions | 174,547 |
| Purchased ADP Svcs | 68,858 |
| **Transcription** | **21,756** |
| **Chaplain** | **6,385** |
| Non-Med Maint Repair | 2,000 |
| **Med Maint Repair** | **350,000** |
| **ADP Equip Maint Repair** | **2,867** |
| DPTM | 45,350 |
| DOIM | 16,000 |
| JAG | 56,000 |
| **Housekeeping** | **1,234,000** |
| **UMB Baseops Reimb** | **570,806** |
| Minor Construction | 148,409 |
| **TOTAL Contract** | **6,011,927** |

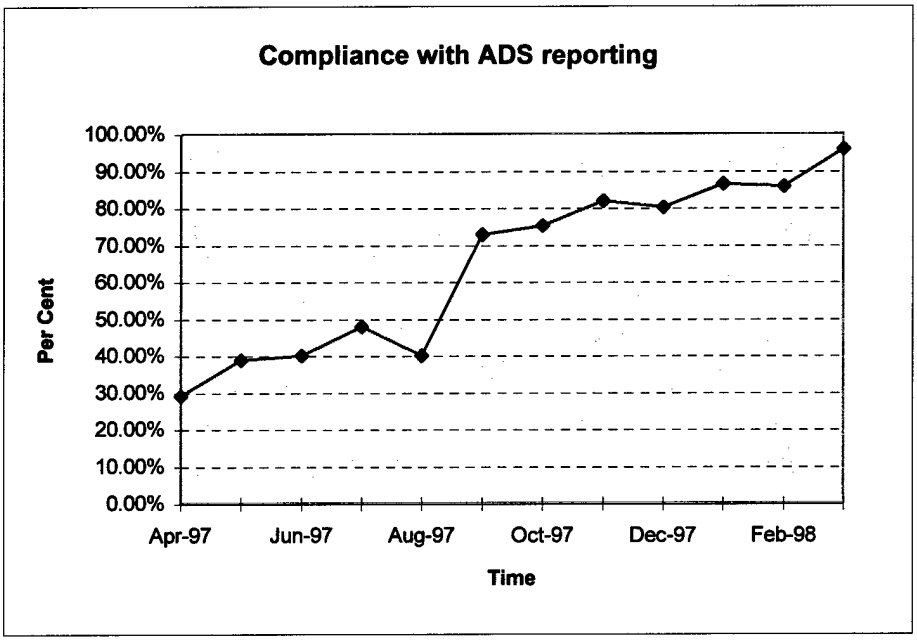
| | |
|---|---|
| Sum of variable costs = | 2,021,129 |
| Sum of fixed costs = | 3,990,798 |

Note: Actual dollar values

Appendix F

Overall Clinical compliance with ADS reporting at Moncrief Army Community Hospital

| Time | Percentage |
|---|---|
| Apr-97 | 29.30% |
| May-97 | 38.90% |
| Jun-97 | 40.10% |
| Jul-97 | 48.10% |
| Aug-97 | 40.10% |
| Sep-97 | 73.00% |
| Oct-97 | 75.40% |
| Nov-97 | 82.10% |
| Dec-97 | 80.40% |
| Jan-98 | 86.60% |
| Feb-98 | 86.00% |
| Mar-98 | 96.00% |



## Appendix G: Acronyms

| | |
|---|---|
| AD | Active Duty |
| ADS | Ambulatory Data System |
| CEIS | Corporate Executive Information System |
| CHAMPUS | Civilian Health and Medical Program for the Uniform Services |
| CHCS | Comprehensive Health Care System |
| DEERS | Defense Enrollment Eligibility Reporting System |
| DoD | Department of Defense |
| DHP | Defense Health Program |
| EBC | Enrollment Based Capitation |
| FFS | Fee-for-service |
| GDP | Gross Domestic Product |
| HMO | Health Maintenance Organization |
| IET | Initial Entry Training |
| IPA | Individual Practice Association |
| IS | Information Systems |
| MACH | Moncrief Army Community Hospital |
| MEDCOM | U.S. Army Medical Command |
| MCS | Managed Care Support |
| MEPRS | Medical Expense and Reporting System |
| MHS | Military Health System |
| MTF | Military Treatment Facility |
| OASD(HA) | Office of the Assistant Secretary of Defense (Health Affairs) |
| PCM | Primary Care Manager |
| POS | Point of Service |
| PPO | Preferred Provider Organization |
| PPIP | Putting Prevention Into Practice |
| PLANNER | Program Linking Annual Network Needs and Enrollment Resourcing |
| PMPM | Per Member Per Month |
| RAPS | Resource Analysis and Planning System |
| RCMAS | Retrospective Case Mix Analysis System |
| RM | Resource Management |
| ROI | Return On Investment |
| TRADOC | Training and Doctrine Command |
| TRICARE | Tri-Service Health Care |
| UM | Utilization Management |

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